GROWTH, DEVELOPMENT AND AGING

VOLUME 55, NUMBER 1 SPRING 1991

TABLE OF CONTENTS

**Purposes and Policies of GDA** ..... 2
DAVID E. HARRISON

***Brief Editorial*: Biorhythms as a Possible Regulator of Longevity** ..... 3
VLADIMIR V. BAKAEV

**Influence of Method of Model Fitting and Gender on Estimated Parameters for the Relationship Between Starvation Heat Production and Body Size in the Domestic Fowl** ..... 5
S. R. ROGERS, G. M. PESTI and R. J. JOHNSON

**Integration of Proliferation and Differentiation Phenomena During Rodent Kidney Ontogeny** ..... 11
PIERRE CHAILLER and NORMAND BRIERE

**Origin of the Avian Glycogen Body: I. Effects of Tail Bud Removal in the Chick Embryo** ..... 19
LOUIS D. DE GENNARO

**Effects of Nutrient Intake and Sexual Age of the Dam at Mating on Fetal Development in Swine** ..... 27
KEITH A. BRYAN and DANIEL R. HAGEN

**A Longitudinal Investigation of the Effects of Experience on the Behavior of Aging Mice** ..... 35
BARBARA W. MARQUETTE, Ph.D. and CARL W. SCHNEIDER, Ph.D.

**Concentration of Insulin-like Growth Factors (IGF-I and IGF-II) in Tissues of Developing Lean and Obese Pig Fetuses** ..... 43
G. J. HAUSMAN, D. R. CAMPION and F. C. BUONOMO

**Major Histocompatibility Complex Antigen Expression on Lymphocytes from Aging Strain A Mice** ..... 53
DIANE JANICK-BUCKNER, CAROL J. BRIGGS, TERRY E. MEYER, NANCY HARVEY and CAROL M. WARNER

GROWTH, DEVELOPMENT AND AGING

VOLUME 55, NUMBER 2 SUMMER 1991

TABLE OF CONTENTS

**Purposes and Policies of GDA** ..... 66
DAVID E. HARRISON

**Specific Heat Output (SHO) of Visceral Organs/Tissues: The Hypothesis and First Estimations** ..... 105
JEROME C. PEKAS

**Body Weight and Longevity in Genetically Obese and Non-Obese Mice Fed Fat-Modified Diets** ..... 81
BARBARA A. SMITH, MARILYN S. EDWARDS, BRENDA E. BALLACHEY, DAVID A CRAMER, and THOMAS M. SUTHERLAND

**Growth Hormone Secretion in the Obese Male Rat: Modulation by the Gonadal and Thyroid Axes** ..... 91
WILLIAM J. MILLARD, TERESA M. ROMANO, MERI P. LAYDEN, WILLIAM E. RUSSELL, and ROY J. MARTIN

**Vulnerability of Developing Brain to Undernutrition: Claims of Selective Sensitivity of the Cerebellum Found to Be Misleading on Theoretical and Empirical Grounds** ..... 105
A. N. PEELING and J. L. SMART

**Expression of Metallothionein-Human Growth Hormone Fusion Genes in Transgenic Mice Results in Disproportionate Skeletal Gigantism** ..... 117
ECKARD WOLF, KARL RAPP, and GOTTFRIED BREM

**Human Stature: Which Growth Model?** ..... 129
PIERRE JOLICOEUR, HASSANE ABIDI, and JACQUES PONTIER

**General Announcements** ..... 133

GROWTH, DEVELOPMENT AND AGING

VOLUME 55, NUMBER 3 FALL 1991

TABLE OF CONTENTS

**Purposes and Policies of GDA** ..... 137
DAVID E. HARRISON

**Effects of Age and Drugs on Food and Fluid Intake** ..... 139
B. JÄNICKE and H. COPER

**Muscle Differentiation in the Bovine Fetus: A Histological and Histochemical Approach** ..... 151
J. ROBELIN, A. LACOURT, D. BÉCHET, M. FERRARA, Y. BRIAND and Y. GEAY

**Emerging Fractal Properties in Gorgonian Growth Forms (Cnidaria: Octocorallia)** ..... 161
BRUNO BURLANDO, RICCARDO CATTANEO-VIETTI, ROBERTA PARODI and MICHELE SCARDI

**Reduction in Rate of Occurence of Age Related Lesions in Dietary Restricted Laboratory Mice** ..... 169
RODERICK T. BRONSON and RUTH D. LIPMAN

**Separation of Two Subpopulations of Old Human Fibroblasts by Mitochondria (Rhodamine 123) Fluorescence** ..... 185
ANDREW O. MARTINEZ, DARRELL OVER, LINDA S. ARMSTRONG, LAWRENCE MANZANO, RICHARD TAYLOR and JAMES CHAMBERS

**Multiphasic Analysis of Growth Curves for Progeny of a Somatotropin Transgenic Male Mouse** ..... 193
W. J. KOOPS and M. GROSSMAN

**Multiphasic Growth and Allometry** ..... 203
W. J. KOOPS and M. GROSSMAN

GROWTH, DEVELOPMENT AND AGING

VOLUME 55, NUMBER 4 WINTER 1991

TABLE OF CONTENTS

**Purposes and Policies of GDA** ..... 218
DAVID E. HARRISON

**Changes in Organ Growth Pattern Associated with Long-term Selection for High Growth Rate in Quail** ..... 219
CLAS LILJA and HENRY L. MARKS

**Growth Characteristics of Metallothionein-Human Growth Hormone Transgenic Mice as Compared to Mice Selected for High Eight-Week Body Weight and Unselected Controls: I. Body Weight Gain and External Body Dimensions** ..... 225
ECKHARD WOLF, RÜDIGER WANKE, WALTER HERMANNS, GOTTFRIED BREM, FRANZ PIRCHNER, and INES VON BUTLER-WEMKEN

**Growth Characteristics of Metallothionein-Human Growth Hormone Transgenic Mice as Compared to Mice Selected for High Eight-Week Body Weight and Unselected Controls: II. Skeleton** ..... 237
ECKHARD WOLF, KARL RAPP, RÜDIGER WANKE, WALTER HERMANNS, FRANZ PIRCHNER, INES VON BUTLER-WEMKEN and GOTTFRIED BREM

**Heterogeneity of Growth of Bone in Children at the Spine, Radius and Total Skeleton** ..... 249
P. GEUSENS, F. CANTATORE, J. NIJS, W. PROESMANS, F. EMMA, and J. DEQUEKER

**The Contributions of Growth and Puberty to Peak Bone Mass** ..... 257
C. L. GORDON, J. M. HALTON, S. A. ATKINSON, and C. E. WEBBER

**Growth Retardation During the Suckling Period in Expanded Litters of Rats: Observations of Growth Patterns and Protein Turnover** ..... 263
JOHN D. JOHNSON, W. JAMES WOGENRICH, KATHY C. HSI, BETTY J. SKIPPER, and ROBERT E. GREENBERG

**Effect of Aging and Diet Restriction on Monoamines and Amino Acids in Cerebral Cortex of Fischer-344 Rats** ..... 275
JUPITA M. YEUNG and EITAN FRIEDMAN